

## NGK 52405

# NGK Rc-Fdz090 Wire Set Case 5 Instruction Manual

Model: 52405

## INTRODUCTION

The NGK Rc-Fdz090 Wire Set Case 5 is designed to provide reliable ignition performance for compatible vehicles. These spark plug wires feature a ferrite magnetic core, offering reduced resistance compared to traditional carbon core wires while maintaining radio frequency interference (RFI) suppression. The construction includes positive-locking, corrosion-resistant stainless steel terminal ends for a secure fit and enhanced durability against vibration and separation. This manual outlines the proper procedures for installation, general operation, maintenance, and provides product specifications.

## PRODUCT FEATURES

- **Ferrite Magnetic Core:** Offers lower resistance for improved power delivery to the spark plug and maintains RFI suppression.
- **Durable Construction:** Features positive-locking, corrosion-resistant stainless steel terminal ends for a tight fit and resistance to vibration.
- **Longer Life:** Unlike traditional carbon core wires, NGK's wire wound ferrite magnetic cables maintain consistent resistance over time.
- **Optimized Design:** Custom manufactured for specific vehicle applications, ensuring original equipment identical connections.



Image 1: The NGK Rc-Fdz090 Wire Set, featuring blue wires and red spark plug boots.



Image 2: Detailed diagram showing the internal components of an NGK spark plug wire, including the EPDM/silicone inner insulation, fiberglass braiding, loose and tight winding, ferrite magnetic layer, and aramid composite core.

## The NGK Difference

### Ferrite magnetic layer

Enables uniform conductivity and lower resistance than conventional wires (9k ohm/meter v. 16k ohm/meter)

### Stainless steel terminal and "C" clip with a chromate retainer

Higher durability and corrosion resistance

### Aramid fiber core

Enhances the strength of the wire by adding voltage protection

### Triple crimp connector design

Better connection of the core between the terminal and cable

### Silicone jacket

Prevents water contamination and withstands temperatures up to 482° F

### Variable pitch wire winding process

Resists RFI by breaking electrical waves created from ignition

Image 3: Infographic detailing the NGK Difference, including ferrite magnetic layer, stainless steel terminal, aramid fiber core, triple crimp connector, silicone jacket, and variable pitch wire winding.

## SETUP AND INSTALLATION

Proper installation of spark plug wires is crucial for vehicle performance and safety. If you are not experienced with automotive electrical systems, it is recommended to seek professional assistance.

## Safety Precautions:

- Always disconnect the vehicle's battery before beginning any work on the ignition system.
- Ensure the engine is cool to the touch to prevent burns.
- Wear appropriate personal protective equipment, including gloves and eye protection.

## Installation Steps (General Guidance):

1. **Identify Wires:** Note the routing and length of each existing spark plug wire. It is often helpful to replace one wire at a time to avoid mixing up the firing order.
2. **Remove Old Wires:** Carefully twist and pull the spark plug boot from the spark plug. Do not pull on the wire itself. Repeat for the distributor cap or coil pack end.
3. **Inspect Components:** Check spark plugs for wear and replace if necessary. Inspect the distributor cap or coil pack terminals for corrosion or damage.
4. **Install New Wires:** Match the length of the new NGK wire to the old one. Apply a small amount of dielectric grease (not included) to the inside of the spark plug boots to aid in installation and provide a moisture seal.
5. **Connect to Spark Plug:** Push the boot firmly onto the spark plug until you feel a positive click or a secure connection.
6. **Connect to Distributor/Coil:** Route the wire correctly and push the other end onto the corresponding terminal on the distributor cap or coil pack until it is fully seated.
7. **Secure Wires:** Use wire looms or clips to keep the wires organized and away from hot engine components or moving parts.
8. **Reconnect Battery:** Once all wires are securely installed, reconnect the vehicle's battery.
9. **Test System:** Start the engine and listen for any misfires or unusual noises.

For specific vehicle-model installation instructions, consult your vehicle's service manual.

## OPERATING PRINCIPLES

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Spark plug wires are a critical component of a vehicle's ignition system. Their primary function is to transfer high voltage from the ignition coil (or distributor/coil pack) to the spark plugs. This high voltage creates a spark across the spark plug gap, igniting the air-fuel mixture in the engine's cylinders.

The NGK Rc-Fdz090 wires are designed with a ferrite magnetic core to efficiently conduct this high voltage while suppressing electromagnetic interference (EMI) that could affect other electronic systems in the vehicle. The low resistance of the ferrite core ensures that maximum energy reaches the spark plug, contributing to a strong, consistent spark and efficient combustion.

## MAINTENANCE

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Regular inspection and proper care can extend the life of your spark plug wires and maintain optimal engine performance.

- **Visual Inspection:** Periodically check the wires for cracks, fraying, burns, or signs of rodent damage. Inspect the boots for tears or hardening.
- **Cleanliness:** Keep the wires and boots clean from oil, grease, and dirt, which can degrade the insulation and lead to misfires.
- **Secure Connections:** Ensure all boots are fully seated on both the spark plugs and the distributor/coil pack. Loose connections can cause arcing and damage.
- **Routing:** Verify that wires are properly routed and secured away from hot exhaust manifolds, moving belts, and other engine components that could cause damage.
- **Replacement Interval:** While NGK wires are designed for longevity, consult your vehicle's maintenance

schedule or a qualified mechanic for recommended replacement intervals.

## TROUBLESHOOTING

If you experience issues after installing or while using your NGK spark plug wires, consider the following common problems and solutions:

Symptom	Possible Cause	Solution
Engine Misfire / Rough Idle	Loose connection, damaged wire, incorrect firing order.	Check all connections. Inspect wires for damage. Verify correct firing order.
Reduced Fuel Economy	Inefficient spark due to worn or damaged wires.	Inspect and replace any compromised wires. Ensure proper spark plug gap.
Engine Hesitation / Lack of Power	Insufficient voltage reaching spark plugs.	Check for proper wire routing and ensure no wires are touching hot components. Test wire resistance if possible.
Radio Interference	Damaged RFI suppression in wires.	Inspect wires for damage. Ensure wires are properly seated and not arcing.

If troubleshooting steps do not resolve the issue, consult a certified automotive technician.

## SPECIFICATIONS

Attribute	Detail
Brand	NGK
Model Name	52405
Item Model Number	52405
Manufacturer Part Number	52405
UPC	087295524053
Special Feature	Ferrite Magnetic Core
Compatible Devices	Vehicle Electronic Components (Powersports)
Color	Blue
Material	Rubber or Plastic (Outer Material)
Item Weight	1.31 pounds
Product Dimensions	8 x 6 x 4 inches
Number of Items	5 (Wire Set Case 5)
Recommended Uses	Replacing or upgrading spark plug wires in powersports vehicles

## OFFICIAL PRODUCT VIDEO

Video: This official NGK video, titled "You have the passion. We have the power.", showcases the brand's commitment to

*performance and quality in various automotive and powersports applications. It highlights the robust nature of NGK ignition products.*

## WARRANTY INFORMATION

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NGK products are manufactured to high standards. This product may be covered by a limited lifetime warranty. For detailed information regarding warranty coverage, terms, and conditions, please refer to the official NGK website or contact NGK customer support directly. Proof of purchase may be required for warranty claims.

## SUPPORT AND CONTACT

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For technical assistance, product inquiries, or support, please visit the official NGK website or contact their customer service department. You can typically find contact information, FAQs, and additional resources on the manufacturer's website.

**NGK Official Website:** [www.ngksparkplugs.com](http://www.ngksparkplugs.com)